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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,068

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EXAMINER

YOUNG, SHAWQUA

ART UNIT

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1626

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/566,068	Applicant(s) BIRCH ET AL.	
	Examiner SHAWQUIA YOUNG	Art Unit 1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10 and 16-22 is/are pending in the application.
- 4a) Of the above claim(s) 16 and 20-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-10 and 17-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1, 3-10 and 16-22 are currently pending in the instant application.

I. *Response to Arguments/Remarks*

Applicants' amendment, filed on June 23, 2008, has overcome the rejection of claims 1, 3-10, 17 and 18 under 35 USC 112, second paragraphs as being indefinite for the use of brackets in the claims; the rejection of claims 1, 3-10 and 17 under 35 USC 112, second paragraph as being indefinite for the term "saturated ring"; the rejection of claim 18 under 35 USC 112, second paragraph as being incomplete for omitting structural cooperative relationships of elements and the objection of claim 9 for containing a parenthesis as the end of the claim. The above rejections and objection have been withdrawn.

II. *Rejection(s)*

35 USC § 103 - OBVIOUSNESS REJECTION

The following is a quotation of 35 U.S.C. § 103(a) that forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Graham v. John Deere Co. set forth the factual inquiries necessary to determine

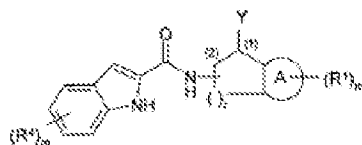
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obviousness under 35 U.S.C. §103(a). See *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966). Specifically, the analysis must employ the following factual inquiries:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3-10, 17 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Strobel, et al.* (US 2003/0055093). Applicants claim a compound of

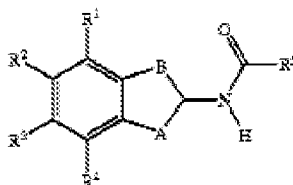


formula

wherein all variables are as defined in claim 1.

The Scope and Content of the Prior Art (MPEP §2141.01)

Strobel, et al. teaches acylated indanyl amines that are useful in the upregulation of endothelial nitric oxide synthase (eNOS). The invention is represented by the general formula:



[0012] In the above formula,

[0013] R^1 and R^4 are independently from each other selected from the group consisting of:

[0014] H; unsubstituted and at least monosubstituted C_1 - C_{10} -alkyl, C_2 - C_{10} -alkenyl and C_3 - C_{10} -alkynyl, the substituents of which are selected from the group consisting of F, OH, C_1 - C_3 -alkoxy, $(C_1$ - C_6 -alkyl)mercapto, CN, COOR¹⁵, CONR¹⁶, and unsubstituted and at least monosubstituted phenyl and heteroaryl, the substituents of which are selected from the group consisting of halogens, pseudohalogens, C_1 - C_3 -alkyl, C_1 - C_3 -alkoxy and CF₃; unsubstituted and at least monosubstituted phenyl and heteroaryl, the substituents of which are selected from the group consisting of halogens, pseudohalogens, C_1 - C_3 -alkyl, C_1 - C_3 -alkoxy and CF₃; R¹⁷CO, CONR¹⁸R¹⁹, COOR²⁰, CF₃, halogens, pseudohalogens, NR²¹R²²OR²³, S(O)_mR²⁴, SO₂NR²⁵R²⁶, and NO₂;

[0015] R^2 and R^3 are independently from each other selected from the group consisting of:

[0016] H; halogens; pseudohalogens; unsubstituted and at least monosubstituted C_1 - C_{10} -alkyl the substituents of which are selected from the group consisting of OH, phenyl, and heteroaryl; OH; C_1 - C_{10} -alkoxy; phenoxy; S(O)_mR²⁷; CF₃; CN; NO₂; $(C_1$ - C_{10} -alkyl)amino; di(C_1 - C_{10} -alkyl)amino $(C_1$ - C_6 -alkyl)-CONH—; unsubstituted and at least monosubstituted phenyl-CONH— and phenyl-SO₂—O—, the substituents of which are selected from the group consisting of halogens, pseudohalogens, CH₃ and methoxy; $(C_1$ - C_6 -alkyl)SO₂—O—; unsubstituted and at least monosubstituted $(C_1$ - C_6 -alkyl)CO, the substituents of which are selected from the group consisting of F, di(C_1 - C_3 -alkyl)amino, pyrrolidinyl and piperidinyl; and phenyl-CO, the phenyl part of which can be substituted by one or more substituents from the group consisting of C_1 - C_3 -alkyl, halogens and methoxy;

[0017] A is selected from the group consisting of CH₂, CHOH and CH—(C_1 - C_3 -alkyl);

[0018] B is selected from the group consisting of CH₂ and CH—(C_1 - C_3 -alkyl);

[0019] R^5 is a group Ar or a group Hetar both of which can be unsubstituted or carry one or more substituents selected from the group consisting of: halogens; pseudohalogens; NH₂; unsubstituted and at least monosubstituted C_1 - C_{10} -alkyl, C_2 - C_{10} -alkenyl, C_3 - C_{10} -alkynyl, C_2 - C_{10} -alkoxy, $(C_1$ - C_{10} -alkyl) amino, di(C_1 - C_{10} -alkyl)amino, the substituents of which are selected from the group consisting of F, OH, C_1 - C_3 -alkoxy, aryloxy, $(C_1$ - C_6 -alkyl)mercapto, NH₂, $(C_1$ - C_6 -alkyl)amino, and di(C_1 - C_6 -alkyl) amino; C_3 - C_5 -alkandyl; phenyl; heteroaryl; aryl- or heteroaryl-substituted C_2 - C_4 -alkyl; CF₃; NO₂; OH; phenoxy; benzoyloxy; $(C_1$ - C_{10} -alkyl)COO; S(O)_mR²⁸; SH; phenylamino; benzylamino; $(C_1$ - C_{10} -alkyl)-CONH—; $(C_1$ - C_{10} -alkyl)-CON(C_1 - C_6 -alkyl); phenyl-CONH—; phenyl-CON(C_1 - C_6 -alkyl); heteroaryl-CONH—; heteroaryl-CON(C_1 -

C_6 -alkyl); $(C_1$ - C_{10} -alkyl)-CO; phenyl-CO; heteroaryl-CO; CF₃-CO; —OCH₂O—; —OCF₃O—; —OCH₂CH₂O—; —CH₂CH₂O—; COOR²⁹, CONR³⁰R³¹, CNH(NH₂), SO₂NR³²R³³, R³⁴SO₂NH—, R³⁵SO₂N(C_1 - C_6 -alkyl); and saturated or at least monounsaturated aliphatic, mononuclear 5- to 7-membered heterocycles containing 1 to 3 heteroatoms selected from the group consisting of N, O and S, which heterocycles can be substituted by one or more substituents selected from the group consisting of halogens, C_1 - C_3 -alkyl, C_1 - C_3 -alkoxy, OH, oxo and CF₃, where said heterocycles can optionally be condensed to the said group Ar or the said group Hetar; wherein all aryl, heteroaryl, phenyl, aryl-containing, heteroaryl-containing and phenyl-containing groups, which are optionally present in the said substituents of the said group Ar or the said group Hetar, can be substituted by one or more substituents selected from the group consisting of halogens, pseudohalogens, C_1 - C_3 -alkyl, OH, C_1 - C_3 -alkoxy, and CF₃;

[0020] R^6 is selected from the group consisting of:

[0021] H; C_1 - C_{10} -alkyl, which can be substituted by one or more substituents selected from the group consisting of F, C_1 - C_6 -alkoxy, and di(C_1 - C_6 -alkyl)amino; aryl- $(C_1$ - C_6 -alkyl) and heteroaryl- $(C_1$ - C_6 -alkyl), which can be substituted by one or more substituents selected from the group consisting of halogens, C_1 - C_4 -alkoxy, and di(C_1 - C_6 -alkyl)amino;

[0022] R^7 is selected from the group consisting of:

[0023] H; C_1 - C_{10} -alkyl which can be substituted by one or more substituents selected from the group consisting of F, C_1 - C_6 -alkoxy, di(C_1 - C_6 -alkyl)amino and phenyl; phenyl; indanyl; and heteroaryl; and wherein each of the aforementioned aromatic groups can be unsubstituted or carry one or more substituents from the group consisting of halogens, pseudohalogens, C_1 - C_3 -alkyl, C_1 - C_3 -alkoxy and CF₃;

[0024] R^8 is H or C_1 - C_{10} -alkyl;

[0025] R^9 is selected from the group consisting of: C_1 - C_{10} -alkyl which can be unsubstituted or carry one or more substituents from the group consisting of: F, $(C_1$ - C_6 -alkoxy), di(C_1 - C_6 -alkyl)amino; and unsubstituted and at least monosubstituted phenyl and heteroaryl, the substituents of which are selected from the group consisting of C_1 - C_3 -alkyl, C_1 - C_3 -alkoxy, halogens, pseudohalogens, and CF₃;

[0026] R^{10} independently has the same meaning as R^7 ;

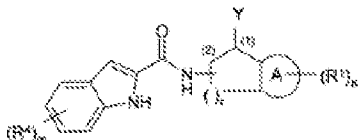
[0027] R^{11} independently has the same meaning as R^8 ;

[0028] R^{12} independently has the same meaning as R^9 ;

[0029] R^{13} is selected from the group consisting of: H; C_1 - C_6 -alkyl; unsubstituted and substituted phenyl, benzyl, heteroaryl, $(C_1$ - C_6 -alkyl)-CO, phenyl-

The difference between the prior art of *Strobel, et al.* and the instant invention is that there is homologous subject matter. Not all of the substituents are taught, however there is overlap between the substituents disclosed especially in view of the preferred embodiments taught by the prior art. See *In re Lemin* 141 USPQ 814- choosing some among many.

Applicants are claiming a compound of the formula



wherein specifically r is 1 and Y can represent an optionally substituted (1-4C)alkyl. The prior art reference of *Strobel, et al.* teaches a similar compound wherein the variable of B (equivalent to the CH-Y in the instant application) can be CH₂ or CH-(C₁-C₃-alkyl) (See page 2, paragraph 0018). The prior art reference also teaches specific compounds such as 5-bromo-1H-indole-2-carboxylic acid indan-2-ylamide (See ex 241, page 30), 7-nitro-1H-indole-2-carboxylic acid indan-2-ylamide (See ex 252, page 31), 5-methyl-1H-indole-2-carboxylic acid indan-2-ylamide (See ex 254, page 31), etc.

In Ex parte Bluestone, 135 USPQ 199, it was well established that the interchange of alkyl and hydrogen is obvious in and of itself. For example, it is obvious to prepare an alkyl substituted (i.e. methyl) indanyl amine derivative wherein the indanyl ring is substituted at carbon 1 when the art teaches an unsubstituted acylated indanylamine wherein the indanyl ring could be substituted at carbon 1 with a C₁-C₃ alkyl with a reasonable expectation of success. Specifically, a methylsubstituted indanyl ring and an unsubstituted indanyl ring are considered homologues and are obvious absent unexpected results. Therefore, it would have been prima facie obvious to one having ordinary skill in the art at the time the invention was made to prepare adjacent homologs based on the teachings of the preferred embodiments in the prior art. A strong prima facie obviousness has been established.

Claim Rejections - 35 USC § 112, 2nd paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. Claim 19 recites "A compound of the formula (I) wherein...." and the claim is an independent claim. However, claim 19 does not show the structure of formula (I) which is necessary for one to know what compound is being described.

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III. Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawquia Young whose telephone number is 571-272-9043. The examiner can normally be reached on 7:00 AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on 571-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Shawquia Young/

Examiner, Art Unit 1626

/Kamal A Saeed, Ph.D./

Primary Examiner, Art Unit 1626